

PATENT COOPERATION TREATY  
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PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: 22 March 2001 (22.03.01)	
International application No.: PCT/GB00/03275	Applicant's or agent's file reference: FP-09-0015
International filing date: 24 August 2000 (24.08.00)	Priority date: 10 September 1999 (10.09.99)
Applicant: JUBB, Gary, Anthony et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:

08 December 2000 (08.12.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer:  J. Zahra Telephone No.: (41-22) 338.83.38
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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)


Applicant's or agent's file reference FP-09-0015	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/03275	International filing date (day/month/year) 24/08/2000	Priority date (day/month/year) 10/09/1999
International Patent Classification (IPC) or national classification and IPC C03C13/00		
Applicant THE MORGAN CRUCIBLE COMPANY PLC et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
  - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  08/12/2000	Date of completion of this report  28.09.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Nobis, B  Telephone No. +49 89 2399 8140



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03275

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-10 as originally filed

### Claims, No.:

1-13 as originally filed

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03275

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-13
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-13
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-13
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03275

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1) Reference is made to the following documents:**

D1: WO 94 15883 A cited in the application

D2: WO 93 15028 A cited in the application

**2) Novelty - Art. 33 (1) and (2) PCT**

- 2.1. D1 discloses fibres having resistance to temperatures of up to 1260°C, comprising amounts of SiO<sub>2</sub>, CaO and MgO and having a molar ratio of MgO to CaO as defined in claim 1 of the present application. However, it is explicitly stated, that the SiO<sub>2</sub> excess has to be greater than 21.8 mol% (p. 5 paragraph 2, table 2).
- 2.2. D2 discloses fibres comprising amounts of SiO<sub>2</sub>, CaO and MgO as defined in claim 1 of the present application (p. 9 paragraph 1). SiO<sub>2</sub> excess and molar ratio of MgO/CaO are not defined.
- 2.3. In the light of D1 and D2, novelty is acknowledged for the subject-matter of claim 1 and of claims 2-13, which are dependent on claim 1.

**3) Inventive Step - Art. 33 (1) and (3) PCT**

- 3.1. The technical problem underlying the present invention can be seen in providing an improved high temperature resistant saline soluble fibre having a maximum use temperature of 1200°C or more. This problem is overcome by the present invention by calcium-magnesium-silicate fibres having a certain SiO<sub>2</sub>, CaO and MgO content and having a SiO<sub>2</sub> excess of no greater than 21.8 mol%. The fibres according to the present invention show lower shrinkage at 1260°C than do the fibres of the prior art.

Document D1 is considered to represent the closest prior art.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03275

- 3.2. D1 discloses fibres which are similar to the fibres claimed. However, D1 points away from fibres having the exact composition as the fibres according to the present application by indicating that a  $\text{SiO}_2$  excess of greater than 21.8 mol% is indispensable. It was therefore not foreseeable that the fibres according to the invention show the favourable properties of high temperature resistance and low shrinkage as set forth above. An inventive step is acknowledged for the subject-matter of claim 1 and of claims 2-13, which are dependent on claim 1.

**Re Item VIII**

**Certain observations on the international application**

- a. Claim 12 is not supported by the description as required by Article 6 PCT, as its scope is broader than justified by the description and drawings. The reasons therefore are the following: the composition of claim 12 is broader than the description (p. 3 paragraph 2) due to the formulation "about" preceding the weight percentages.
- b. In tables 1 and 4, no explanation is given what the abbreviations of sample indication in the first column are standing for, and according to which disclosure the comparative fibres were prepared. The contents of tables 1 and 4 is thus rendered unclear (Article 5 PCT).

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>FP-09-0015</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 03275</b>	International filing date (day/month/year) <b>24/08/2000</b>	(Earliest) Priority Date (day/month/year) <b>10/09/1999</b>
Applicant <b>THE MORGAN CRUCIBLE COMPANY PLC et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1



None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03275

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C03C13/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 94 15883 A (JUBB GARY ANTHONY ;MORGAN CRUCIBLE CO (GB)) 21 July 1994 (1994-07-21) cited in the application page 4, paragraph 3 -page 6, paragraph 3; tables	1-13
A	WO 93 15028 A (MORGAN CRUCIBLE CO) 5 August 1993 (1993-08-05) cited in the application page 7, paragraph 3 -page 9, paragraph 4; tables	1-13

☐ Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

14 November 2000

Date of mailing of the international search report

21/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Van Bommel, L



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03275

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9415883 A	21-07-1994	WO 9315028 A	05-08-1993
		AT 136874 T	15-05-1996
		AU 663155 B	28-09-1995
		AU 3358493 A	01-09-1993
		AU 690864 B	30-04-1998
		AU 4508197 A	05-02-1998
		AU 686594 B	12-02-1998
		AU 5837494 A	15-08-1994
		BR 9305741 A	28-01-1997
		BR 9406117 A	19-03-1996
		CA 2154442 A	21-07-1994
		CN 1116422 A,B	07-02-1996
		CZ 9501836 A	15-05-1996
		DE 69400154 D	23-05-1996
		DE 69400154 T	28-11-1996
		DK 679145 T	12-08-1996
		EP 0621858 A	02-11-1994
		EP 0679145 A	02-11-1995
		EP 0710628 A	08-05-1996
		ES 2086248 T	16-06-1996
		FI 943380 A	14-09-1994
		GB 2277516 A,B	02-11-1994
		GB 2289673 A,B	29-11-1995
		HK 1001474 A	19-06-1998
		HK 1001475 A	19-06-1998
		JP 7502969 T	30-03-1995
		JP 8506561 T	16-07-1996
		KR 236883 B	15-01-2000
		NO 942655 A	14-07-1994
		PL 309954 A	13-11-1995
		SK 85694 A	05-01-1995
		ZA 9400236 A	22-08-1994
		KR 238348 B	15-01-2000
		US 5811360 A	22-09-1998
		US 5955389 A	21-09-1999
WO 9315028 A	05-08-1993	AT 136874 T	15-05-1996
		AU 663155 B	28-09-1995
		AU 3358493 A	01-09-1993
		AU 690864 B	30-04-1998
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		AU 686594 B	12-02-1998
		AU 5837494 A	15-08-1994
		BR 9305741 A	28-01-1997
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		CA 2154442 A	21-07-1994
		CN 1116422 A,B	07-02-1996
		CZ 9501836 A	15-05-1996
		DE 69400154 D	23-05-1996
		DE 69400154 T	28-11-1996
		DK 679145 T	12-08-1996
		EP 0621858 A	02-11-1994
		EP 0679145 A	02-11-1995
		EP 0710628 A	08-05-1996
		ES 2086248 T	16-06-1996
		FI 943380 A	14-09-1994
		WO 9415883 A	21-07-1994
		GB 2277516 A,B	02-11-1994

US 5,954,247

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03275

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9315028 A		GB 2289673 A,B	29-11-1995
		HK 1001474 A	19-06-1998
		HK 1001475 A	19-06-1998
		JP 7502969 T	30-03-1995
		JP 8506561 T	16-07-1996
		KR 236883 B	15-01-2000
		NO 942655 A	14-07-1994
		PL 309954 A	13-11-1995
		SK 85694 A	05-01-1995
		ZA 9400236 A	22-08-1994
		AU 2717195 A	28-09-1995
		CA 2127357 A	05-08-1993
		CN 1078218 A,B	10-11-1993
		CZ 9401700 A	14-06-1995
		GB 2287934 A	04-10-1995
		HU 68033 A	29-05-1995
		NZ 246629 A	27-07-1997
		RU 2113420 C	20-06-1998
		US 5994247 A	30-11-1999
		ZA 9300311 A	23-08-1993

# PATENT COOPERATION TREATY

PCT

## NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

PHILLIPS & LEIGH  
5 Pemberton Row  
London EC4A 3BA  
ROYAUME-UNI

RECEIVED

61/20 MAR 2001

IMPORTANT NOTICE

Date of mailing (day/month/year) 22 March 2001 (22.03.01)		
Applicant's or agent's file reference FP-09-0015		
International application No. PCT/GB00/03275	International filing date (day/month/year) 24 August 2000 (24.08.00)	Priority date (day/month/year) 10 September 1999 (10.09.99)
Applicant THE MORGAN CRUCIBLE COMPANY PLC et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
AE,AG,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CR,CU,CZ,DE,DK,DM,DZ,EA,EE,EP,ES,  
FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,  
MN,MW,MX,MZ,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on  
22 March 2001 (22.03.01) under No. WO 01/19744

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

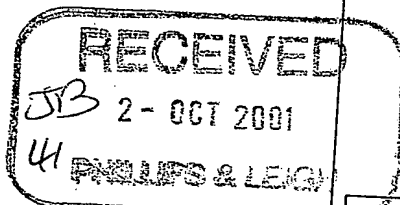
For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

PHILLIPS & LEIGH  
5 Pemberton Row  
London EC4A 3BA  
GRANDE BRETAGNE



PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 71.1)

Date of mailing  
(day/month/year) 28.09.2001

Applicant's or agent's file reference  
FP-09-0015

IMPORTANT NOTIFICATION

International application No.  
PCT/GB00/03275

International filing date (day/month/year)  
24/08/2000

Priority date (day/month/year)  
10/09/1999

Applicant

THE MORGAN CRUCIBLE COMPANY PLC et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

European Patent Office  
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Authorized officer

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